

IN THE CLAIMS:

Please cancel claims 31 to 41, 48, 59 to 70, 73 to 76, 79, 83, 86, 87, 105 to 114, 116, 118, 120, 122 to 126, 128, and 131 to 133 without prejudice. The remaining claims under consideration are as follows:

1. (Previously Presented) A gene encoding a peptide wherein said peptide comprises a first domain and a second domain, wherein: (a) said first domain comprises a hormone selected from the group consisting of gonadotropin-releasing hormone, lamprey III luteinizing hormone releasing hormone (I-LHRH-III), beta chain of luteinizing hormone (bLH), luteinizing hormone, chorionic gonadotropin, the beta subunit of chorionic gonadotropin, follicle stimulating hormone, melanocyte-stimulating hormone, somatostatin, and analogues of these hormones; and (b) said second domain comprises a lytic peptide, wherein said lytic peptide consists of from 10 to 39 amino acid residues, is basic, and will form an amphipathic alpha helix.
2. (Previously Presented) A gene as recited in Claim 1, wherein said first domain is bonded directly to said second domain, without an intermediate linking domain joining said first and second domains.
3. (Previously Presented) A gene as recited in Claim 1, wherein said lytic peptide is selected from the group consisting of a cecropin peptide, a melittin peptide, a defensin peptide, a magainin peptide, a sarcotoxin peptide, and analogs of said peptides.
4. (Previously Presented) A gene as recited in Claim 1, wherein said lytic peptide comprises hecate.
5. (Previously Presented) A gene as recited in Claim 1, wherein said hormone comprises I-LHRH-III.
6. (Previously Presented) A gene as recited in Claim 1, wherein said hormone comprises gonadotropin-releasing hormone.
7. (Previously Presented) A gene as recited in Claim 1, wherein said gene encodes a peptide having the sequence SEQ ID NO: 3 or SEQ ID NO: 4.
8. (Previously Presented) A gene as recited in Claim 1, wherein said gene encodes a peptide having the sequence SEQ ID NO: 12 or SEQ ID NO: 15.
- 9-10. (canceled)

11. (Previously Presented) A gene as recited in Claim 1, wherein said hormone comprises luteinizing hormone.

12. (Previously Presented) A gene as recited in Claim 1, wherein said hormone comprises chorionic gonadotropin or the beta subunit of chorionic gonadotropin.

13. (Previously Presented) A gene as recited in Claim 1, wherein said hormone comprises follicle stimulating hormone.

14. (Previously Presented) A gene as recited in Claim 1, wherein said hormone comprises melanocyte-stimulating hormone.

15 -16. (canceled)

17. (Previously Presented) A gene as recited in Claim 1, wherein said hormone comprises somatostatin.

18 - 126. (canceled)

127. (Previously Presented) A gene as recited in Claim 1, wherein said first domain comprises bLH or the beta subunit of chorionic gonadotropin, or an analog of one of those hormones.

128.-133 (canceled)